Coast of California Storm and Tidal Waves Study – Los Angeles County

Contributed by Heather Schlosser
Wednesday, 18 April 2007

Study Purpose:

The CCSTWS Los Angeles County Shoreline Special Study is not intended to look at specific shoreline problems for the purposes of developing specific measures or alternatives for implementation. In keeping with the original Congressional mandate, the Los Angeles County Shoreline Special Study is proposed to develop a Regional Shore Protection/ Sand Management Plan, similar in concept to Watershed Management Plans. The development of such a Management Plan will involve the quantification of sediment sources, sinks, and transport characteristics; the quantification and interpretation of past shoreline changes; the establishment and testing of techniques for assessing shoreline response to natural forces and human activity on local and regional bases, and developing a means of rapid dissemination of information from the study to all interested parties, including governmental planning, engineering and regulatory agencies, and others interested in the California Coastline.

Summary:

The study area covers the 119 kilometers (74 miles) of Pacific Ocean coastline located along the County of Los Angeles in California. Los Angeles County is bordered by Ventura County to the north and on the south by Orange County. The coastal morphology is highly diversified throughout the region. From the Ventura/Los Angeles County Line to west of Santa Monica, with the exception of Trancas, Zuma, and Malibu Point, the beaches are typically narrow, with bluff formations fronting the steep Santa Monica Mountain Range and are aligned in an east-west direction. The Santa Monica Bay stretches from Point Dume southeast to Point Vincente on the Palos Verdes Peninsula with two recreational small craft harbors, Marina del Ray and King Harbor, located within this coastal segment. The Palos Verdes Peninsula largely consists of small crescent beaches flanked by rocky headlands. Downcoast of the peninsula and extending to the San Gabriel River, the majority of the shoreline is low-lying with a moderate dry beach. The shoreline is highly industrialized around Los Angeles and Long Beach Harbors. A small marina and associated recreational facilities are located inside the Alamitos Bay bounded immediately on the southeast by the San Gabriel River. The Non-Federal Sponsor for the feasibility phase study is Los Angeles County.

Background Information/History:

Damages associated with storm tidal surge and increased wave intensity resulting from episodic storm events is a primary concern in Los Angeles County. Past events have caused extensive damages to both public and private facilities and have adversely impacted recreational beach opportunities. The severe storms occurring in the 1983 El Nino season caused approximately $41 million in direct losses along the South Coast Region including both Los Angeles and Orange Counties. Public piers were destroyed; harbor breakwaters were breached; and residential and commercial properties were severely damaged. Wave run-up transports seawater and suspended sand over the berm zone and onto existing roadways and coastal properties, while large-scale seaward cross-shore sediment transport results in losses of sediment to offshore locations where it is highly unlikely to return to nearshore regions. This process continues with each successive storm event, further exacerbating the impacted nearshore conditions.

The coastal beaches of Los Angeles County, with the exception of Trancas, Zuma, Malibu Point, Will Rogers State Beach, Santa Monica Beach, Venice City Beach, Dockweiler State Beach, Manhattan State Beach and Torrance Beach, are typically narrow, which limits lateral beach access. The malnourished beaches continue to erode resulting in a depletion of dry beach width. The additional landward encroachment of the sea magnifies the damages inflicted by storm activity and decreases the recreational beach benefits. The dry beach acts as a protective buffer zone to leeward roadways and various other public and private facilities. Therefore, if the beaches are maintained properly and sustain an adequate width of dry beach, the environmental and economic impacts associated with episodic storm events are projected to decline significantly.

FAQs:

Maps:

Photos:

Stakeholders:

Congressional Interest:
Ms. Jane Harman –D (CA-36)
http://www.house.gov/harman/

Linda T. Sanchez –D (CA-39)
http://lindasanchez.house.gov/

Henry A. Waxman –D (CA-30)
http://www.henrywaxman.house.gov/

Local Sponsors:
Department of Public Works- L.A. County
http://ladpw.org/

Department of Beaches and Harbors
http://beaches.co.la.ca.us/bandh/main.htm

News Releases:

News Articles:

Related Links: http://repositories.cdlib.org/sio/lib/bibliography/2/

Technical Documents/Presentations:

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